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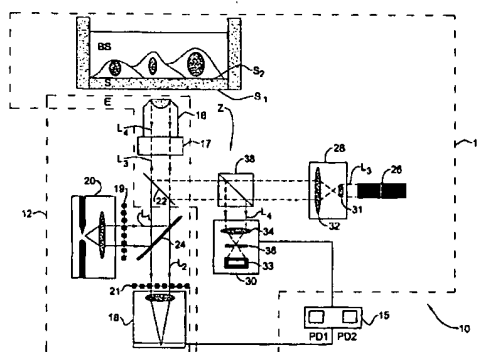
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(54) Title: AUTO-FOCUSING METHOD AND DEVICE



(57) Abstract: An auto-focusing method and device are presented for determining an in-focus position of a sample supported on a substrate plate made of a material transparent with respect to incident electromagnetic radiation. The method utilizes an optical system capable of directing incident electromagnetic radiation towards the sample and collecting reflections of the incident electromagnetic radiation that are to be detected. A focal plane of an objective lens arrangement is located at a predetermined distance from a surface of the substrate, which is opposite to the sample-supporting surface of the substrate. A continuous displacement of the focal plane relative to the substrate along the optical axis of the objective lens arrangement is provided, while concurrently directing the incident radiation towards the sample through the objective lens arrangement to thereby focus the incident radiation to a location at the focal plane of the objective lens arrangement. Reflected components of the electromagnetic radiation collected through said objective lens arrangement are continuously detected. The detected reflected components are characterized by a first intensity peak corresponding to an in-focus position of said opposite surface of the substrate, and a second intensity peak spaced in time from the first intensity peak and corresponding to an in-focus position of said sample-supporting surface of the substrate. This technique enables imaging of the sample when in the in-focus position of the sample-supporting surface of the substrate.

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